



GAU-2621 #5

Attorney's Docket No. 74451.P110

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent Application of:)
Kathrin Berkner) Examiner: Not yet assigned
Application No.: 09/658,393) Art Unit: 2621
Filed: September 8, 2000)
For: WAVELET-BASED IMAGE)
PROCESSING PATH)

RECEIVED
MAY 16 2001
Technology Center 2600

Assistant Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a copy of Information Disclosure Citation Form PTO-1449 together with copies of the documents cited on that form. It is respectfully requested that the cited documents be considered and that the enclosed copy of Information Disclosure Citation Form PTO-1449 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Assistant Commissioner for Patents, Washington, D. C. 20231 on

5/9/01

(Date of Deposit)

Mara E. Brown

(Typed or printed name of person mailing correspondence)

Mara E. Brown
(Signature of person mailing correspondence)

Pursuant to 37 C.F.R. § 1.97, the submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed as an admission that the information cited in this statement is material to patentability.

Pursuant to 37 C.F.R. § 1.97, this Information Disclosure Statement is being submitted under one of the following (as indicated by an "X" to the left of the appropriate paragraph):

 X 37 C.F.R. §1.97(b).

 37 C.F.R. §1.97(c). If so, then enclosed with this Information Disclosure Statement is one of the following:

 A statement pursuant to 37 C.F.R. §1.97(e) or

 A check for \$180.00 for the fee under 37 C.F.R. § 1.17(p).

 37 C.F.R. §1.97(d). If so, then enclosed with this Information Disclosure Statement are the following:

- (1) A statement pursuant to 37 C.F.R. §1.97(e); and
- (2) A check for \$180.00 for the fee under 37 C.F.R. §1.17(p) for submission of the Information Disclosure Statement.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: ~~5/18~~ ~~5/18~~ ~~5/18~~ 5/19/07



Michael J. Mallie
Reg. No. 36,591

12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025-1026
(408) 720-8300

Please type a plus sign (+) inside this box →



PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

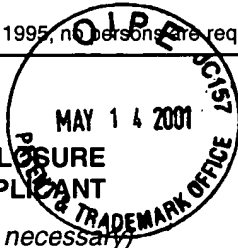


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO
(Modified by BSTZ 6/30/99)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)



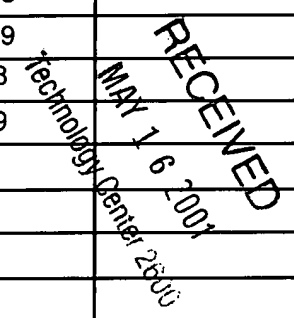
Complete if Known

Application Number	09/658,393
Filing Date	09/08/2000
First Named Inventor	Berkner
Group Art Unit	2621
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110

Sheet 1 of 9

U.S. PATENT DOCUMENTS

Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
	Number				
	5,717,789		Anderson et al.	2/10/1998	
	5,883,973		Pascovici et al.	3/16/1999	
	5,805,721		Vuylsteke et al.	9/8/1998	
	5,867,606		Tretter	2/2/1999	



FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	ABRAMOVICH, F., Silverman, B.W., "Wavelet Decomposition Approaches to Statistical Inverse Problems," Biometrika, vol. 85, pp. 115-129, 1998.	
	BHAKARAN, V., et al., "Text and Image Sharpening of Scanned Images in the JPEG Domain," Proceedings of the 1997 International Conference on Image Processing (ICIP '97), pp. 326-329, 1997.	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Please type a plus sign (+) inside this box →



PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO (Modified by BSTZ 6/30/99) INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	09/658,393
				Filing Date	09/08/2000
				First Named Inventor	Berkner
				Group Art Unit	2621
				Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110				
Sheet	3	of	9		

U.S. PATENT DOCUMENTS				
Examiner Initials *	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate

RECEIVED
 MAY 18 2001
 Technology Center 2600

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS		
Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	POLESEL, A., et al., "Adaptive unsharp masking for contrast enhancement,"	
	in Proceedings of ICIP'97, pp. 267-270, 1997.	
	ZONG, X., Laine, A.F., Geiser, E.A., Wilson, D.C., "De-Noising and contrast enhancement via	
	wavelet shrinkage and nonlinear adaptive gain," Proceedings of the SPIE, vol. 2762,	
	pp. 566-574, Orlando, FL, 1996.	

Examiner Signature	Date Considered	
--------------------	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Please type a plus sign (+) inside this box → 

PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031

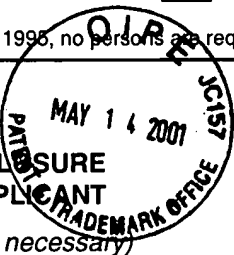
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO
(Modified by BSTZ 6/30/99)

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)



Complete if Known

Application Number	09/658,393
Filing Date	09/08/2000
First Named Inventor	Berkner
Group Art Unit	2621
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110

Sheet 4 of 9

U.S. PATENT DOCUMENTS

Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
		Number			

RECEIVED
MAY 16 2001
Technology Center 2600

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			


OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	ANDREWS, H.C., Hunt, B.R., Digital Image Restoration. Prentice-Hall, Inc. Englewood Cliffs, New Jersey, 1977.	
	BERKNER, K., Wells Jr, R.O., "Smoothness estimates for soft-threshold denoising via translation invariant wavelet transforms," Tech. Rep. CML TR98-01, Rice University, 1998.	
	COIFMAN, R.R., Donoho, D.L., "Translation invariant denoising," in Wavelets and Statistics,	
	Springer Lecture Notes (A. Antoniadis, ed.), Springer-Verlag, 1995.	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Please type a plus sign (+) inside this box → 

PTO/SB/08A (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO (Modified by BSTZ 6/30/99) INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	09/658,393
				Filing Date	09/08/2000
				First Named Inventor	Berkner
				Group Art Unit	2621
				Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110				

U.S. PATENT DOCUMENTS				
Examiner Initials *	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS		
Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	DONOHO, D.L., "De-noising by soft-thresholding," IEEE Transactions on Information Theory,	
	vol. 41, no.3, pp. 613-627, 1995.	
	JAIN, A.K., Fundamentals of digital image processing. Prentice Hall, Englewood Cliffs, NJ, 1989.	
	KINGSBURY, N., "The dual-tree complex wavelet transform: a new efficient tool for image	
	restoration and enhancement," in Proc. European Signal Processing Conf., pp. 319-322, 1998.	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Please type a plus sign (+) inside this box →

PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031

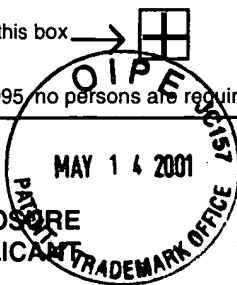
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form **1449A/PTO**
(Modified by BSTZ 6/30/99)

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)



Complete if Known

Application Number	09/658,393
Filing Date	09/08/2000
First Named Inventor	Berkner
Group Art Unit	2621
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110

Sheet 6 of 9

U.S. PATENT DOCUMENTS

Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
		Number			

RECEIVED
MAY 16 2001
Technology Center 2600

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	LANG, M., Guo, H., Odegard, J.E., Burrus, C.S., Wells Jr, R.O., "Noise reduction using an un-	
	decimated discrete wavelet transform," IEEE Signal Processing Letters, vol. 3, pp. 10-12, 1996.	
	PRATT, W., Digital Image Processing, John Wiley & Sons, NY, 1978.	
	ABRAMOVICH, F., Sapatinas, T., Silverman, B.W., "Wavelet Thresholding via a Bayesian	
	Approach," J. Royal Statist. Soc. Ser. B, vol 60, pp. 725-749, 1998.	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Please type a plus sign (+) inside this box →

PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO (Modified by BSTZ 6/30/99) INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	09/658,393
				Filing Date	09/08/2000
				First Named Inventor	Berkner
				Group Art Unit	2621
				Examiner Name	Not yet assigned
Sheet	7	of	9	Attorney Docket Number	74451.P110

U.S. PATENT DOCUMENTS					
Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
	Number				

RECEIVED
 MAY 16 2001
 Technology Center 2600

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS		
Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	DEVORE, R.A., Jawerth, B., Lucier, B.J., "Image compression through wavelet transform coding,"	
	IEEE Trans. Information Theory, vol. 38, no. 2, pp. 719-746, 1992.	
	DONOHU, D.L., Johnstone, I.M., "Adaption to unknown smoothness via wavelet shrinkage,"	
	J. American Statist. Assoc., pp. 1200-1224, 1995.	

Examiner Signature	Date Considered	
---------------------------	------------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Please type a plus sign (+) inside this box →



PTO/SB/08A (10-96)

Approved for use through 10/31/99. OMB 0651-0031

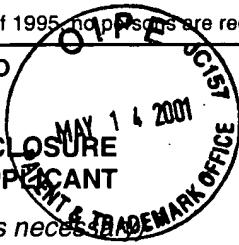
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO
(Modified by BSTZ 6/30/99)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as needed)



Complete if Known

Application Number	09/658,393
Filing Date	09/08/2000
First Named Inventor	Berkner
Group Art Unit	2621
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110

Sheet 8 of 9

U.S. PATENT DOCUMENTS

Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
	Number				

RECEIVED
MAY 16 2001
Technology Center 2600

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	DONOHU, D.L., Vetterli, M., DeBore, R.A., Daubechies, I., "Data compression and harmonic	
	analysis," IEEE Transactions on Information Theory, vol. 44, no. 6, pp. 2435-2476, 1998.	
	LEVY VEHEL, J., Guiheneuf, B., "2-microlocal analysis and applications in signal processing" in	
	Proceedings of International Wavelet Conference, Tanger, Morocco, 1998.	

Examiner Signature	Date Considered
-----------------------	--------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Please type a plus sign (+) inside this box →

PTO/SB/08A (10-96)

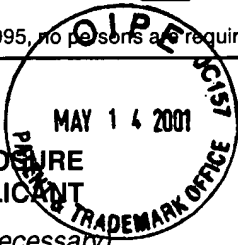
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form **1449A/PTO**
(Modified by BSTZ 6/30/99)

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)



Complete if Known

Application Number	09/658,393
Filing Date	09/08/2000
First Named Inventor	Berkner
Group Art Unit	2621
Examiner Name	Not yet assigned
Attorney Docket Number	74451.P110

Sheet **9** of **9**

U.S. PATENT DOCUMENTS

Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
		Number			

RECEIVED
MAY 16 2001
Technology Center 2600

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation? Yes/No
	Office or Country	Number	Date			

OTHER DOCUMENTS

Examiner Initials *	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published (if known).	Translation? Yes/No
	MUNOZ, A., Blu T., Unser, M., "Non-Euclidean Pyramids," in Proceedings of SPIE Conference,	
	San Diego, vol. 4119, pp. 710-720, 2000.	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.